No. 820,805. PATENTED MAY 15, 1906.

W. F. MANGELS.

AMUSEMENT DEVICE.

APPLICATION FILED MAR. 21, 1905.

2 SHEETS—SHEET 1.

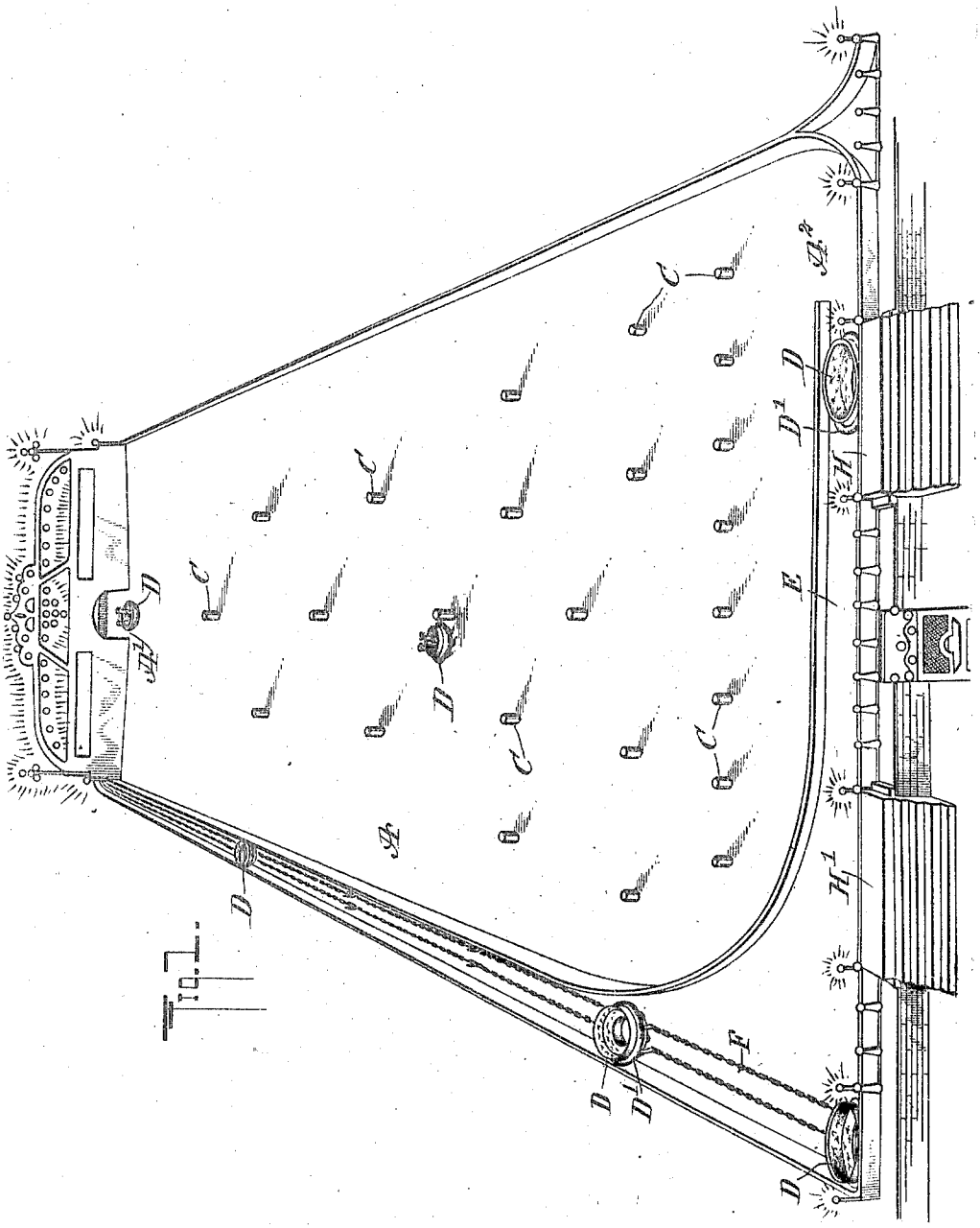

FIG. 1.

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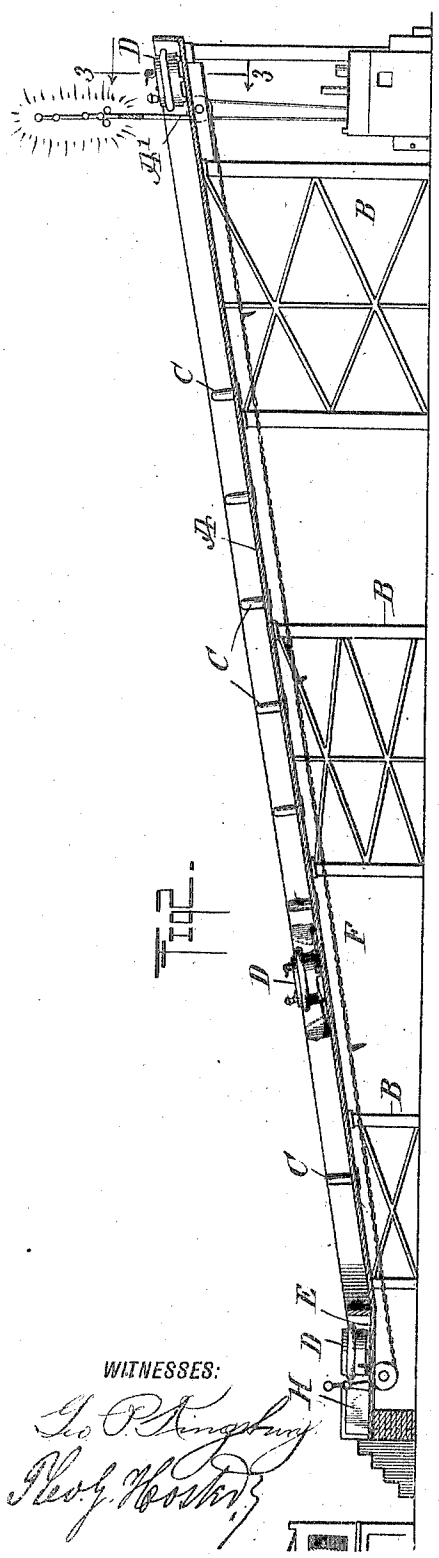

FIG. 2.

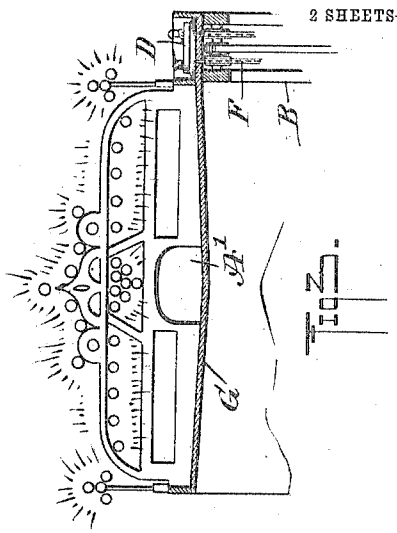

FIG. 3.

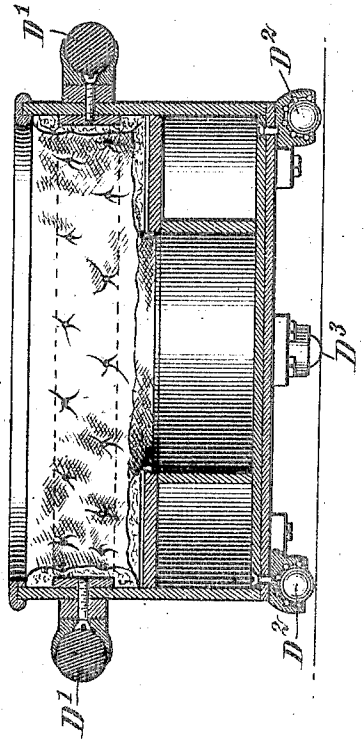

FIG. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM F. MANGELS, OF NEW YORK, N. Y.

AMUSEMENT-DEVICE.

No. 820,805. Specification of Letters Patent. Patented May 15, 1906.

Application filed March 21, 1905. Serial No. 251,221.

To all whom it may concern:

Be it known that I, WILLIAM F. MANGELS, a citizen of the United States, and a resident of the city of New York, Coney Island, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Amusement Device, of which the following is a full, clear, and exact description.

The invention relates to pleasure-railways; and its object is to provide a new and improved amusement device for use in parks, pleasure-resorts, and other places and arranged to give an exciting ride to the occupants of the car and to afford considerable amusement to the onlookers.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement. Fig. 2 is a sectional side elevation of the same. Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 2, and Fig. 4 is an enlarged sectional side elevation of one of the cars.

An inclined surface A is supported on a suitable framework B, and on the said surface A are arranged bumping-posts C, placed suitable distances apart and preferably arranged irregularly on the said surface, as plainly indicated in Fig. 1. On the inclined surface A is adapted to travel by its own weight a car D, preferably made circular in shape and provided with a bumping-ring D', made of an elastic or flexible material and surrounding the car at or near the upper end thereof, the bumping-ring being adapted to come in contact with sundry of the bumping-posts C during the travel of the car from the upper end of the surface A down to the lower end thereof. When the car by its ring D' bumps against one of the posts C, the car is deflected from its straight down course, and at the same time the car is also given a rotation to heighten the effect of the ride.

In order to produce the desired result, the car D is provided at its bottom with balls D^2, which take the place of wheels and are mounted in suitable bearings attached to the bottom of the car, the balls being adapted to travel with their bottoms on the inclined surface A. In the middle of the car D is arranged a ball D^3, which serves as a pivot for the car to turn on, the said ball D^3 having its bottom extending somewhat below the plane in which lie the bottoms of the other or outer balls D^2, so that the car travels mainly on the center ball D^3 and on sundry of the outer balls D^2, whereby a rocking motion is given to the car, and, besides, the car is free to turn on its central axis.

By the arrangement described a car traveling from the entrance end A' of the surface A down the latter is deflected from a straight course by the car bumping against sundry of the posts, so that the car travels in an irregular course down the inclined surface A by its own weight and that of the occupants, and at the same time the car is liable to rock and to turn.

The lower end of the inclined surface A is somewhat contracted, as plainly indicated in Fig. 1, to direct all the cars as they pass down the surface A to an exit-opening A^2, leading to a transversely-arranged track E, connected at one side with an elevator F, extending up the framework B and alongside one of the sides of the surface A, the upper end of the elevator F discharging onto a transversely-extending path G, inclined downwardly from the upper end of the elevator to the entrance-opening A', leading to the surface A. The path G opposite the entrance-opening A' is inclined in a transverse direction, as plainly shown in Fig. 3, so that a car after leaving the upper end of the elevator F travels down the path G in the direction of the latter's length, and when it reaches the transversely-inclined portion opposite the opening A' the car by its own weight passes to and through said opening onto the upper end of the inclined surface A to then start on its downward course in the manner previously mentioned.

When a car reaches the track E at the exit A^2, then the occupants alight from the car and pass to an exit-platform H, while persons desiring to take the ride mount an entrance-platform H' to enter a car at or near the lower end of the elevator F. The latter is preferably provided with two endless traveling chains having upwardly-extending arms for engaging the sides of a car at two places to securely push the car up the elevator-track, the car traveling on its wheels during

this upward pushing by the arms of the elevator-chains.

When a car reaches the upper end of the elevator, then it leaves the elevator without assistance and passes down the path G to the entrance-opening A′ to start on the down course on the surface A, as previously explained.

From the foregoing it will be seen that by the arrangement described an enjoyable and very exciting ride is provided for the occupants of the car and at the same time considerable amusement is afforded to the onlookers.

It will also be noticed that the expense of running the amusement device is very little, as no attendants are required during the trip of the car up the elevator F along the path G and down the inclined surface A, the car on reaching the track E being taken care of by an attendant to assist the occupants of the car to disembark and to direct the car to the receiving-platform H′ to assist other passengers to embark and to finally guide the car to the lower end of the elevator F.

Although I have shown and described a general form of the improvement, it is evident that the same may be greatly varied without deviating from the principle involved. Hence I do not limit myself to the particular construction shown and described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An amusement device comprising an inclined surface having rising projections, and a car adapted to travel down the said surface and to bump against the projections, to change the course of the car, the car having means to turn on a central axis.

2. An amusement device comprising an inclined surface having fixed bumping-posts spaced apart, and a car adapted to travel down the said surface by its own weight, the said car having an external bumping-ring adapted to bump against the said bumping-posts to change the course of the car.

3. An amusement device comprising an inclined surface, bumping-posts fixed on the said surface and spaced apart, and a car having balls at its bottom for supporting the car on the said surface, the car, by its weight, traveling down the inclined surface and bumping against the said bumping-posts to change the course of the car, one of the said balls being arranged in the middle of the car to form a pivot for the car to turn on.

4. An amusement device comprising an inclined surface, bumping-posts fixed on the said surface and spaced apart, and a car having balls at its bottom for supporting the car on the said surface, the car, by its weight, traveling down the inclined surface and bumping against the said bumping-posts to change the course of the car, some of the balls being arranged near the side of the car and one of the balls being centrally arranged, to form a pivot for the car to turn on.

5. An amusement device comprising an inclined surface, bumping-posts fixed on the said surface and spaced apart, and a car having balls at its bottom for supporting the car on the said surface, the car, by its weight, traveling down the inclined surface and bumping against the said bumping-posts to change the course of the car, some of the balls being arranged near the side of the car and one of the balls being centrally arranged, to form a pivot for the car to turn on, the said central ball having its bottom a distance below the plane containing the bottoms of the outer balls.

6. An amusement device comprising a car, an inclined surface for the car to travel on by its own weight, the said surface having means adapted to be engaged by the car to change the course of the car from a straight-down path to an irregular one, a path at the upper end of the said surface, a track along the lower end of the said surface, and an elevator leading from the said track to the said path, the latter being inclined downwardly from the upper end of the elevator to the entrance of the upper end of the said surface.

7. An amusement device comprising a car, an inclined surface for the car to travel on by its own weight, the said surface having means adapted to be engaged by the car to change the course of the car from a straight-down path to an irregular one, the upper end of the said surface having an entrance portion for the car to start, and an inclined path leading to the said entrance portion.

8. An amusement device comprising a car, an inclined surface for the car to travel on by its own weight, the said surface having means adapted to be engaged by the car to change the course of the car from a straight-down path to an irregular one, the upper end of the said surface having, at its middle, an entrance portion for the car to start down the inclined surface, and a path leading to the said entrance portion.

9. An amusement device comprising a car, an inclined surface for the car to travel on by its own weight, the said surface having means adapted to be engaged by the car to change the course of the car from a straight-down path to an irregular one, the upper end of the said surface having, at its middle, an entrance portion for the car to start down the inclined surface, and a path leading to the said entrance portion, the path being inclined downwardly in the direction of its length toward the said entrance portion and inclined transversely at the entrance portion, for the car to travel by its own weight down the said path and through the entrance portion onto the inclined surface.

10. An amusement device comprising a

car, an inclined surface for the car to travel on by its own weight, the said surface having means adapted to be engaged by the car to change the course of the car from a straight-down path to an irregular one, the upper end of the said surface having, at its middle, an entrance portion for the car to start down the inclined surface, a path leading to the said entrance portion, the path being inclined downwardly in the direction of its length toward the said entrance portion and inclined transversely at the entrance portion, for the car to travel by its own weight down the said path and through the entrance portion onto the inclined surface, and an elevator extending upon one side of the said inclined surface and leading to the upper end of the said path.

11. An amusement device provided with a car having an externally-arranged bumping-ring.

12. An amusement device provided with a car having balls for the car to travel on, one of the balls being centrally arranged to form a pivot for the car to turn on.

13. An amusement device provided with a car mounted to travel and having a centrally-disposed pivot for the car to turn on.

14. An amusement device comprising an inclined surface, a car having a resilient outer face and adapted to roll by gravity down the surface, and a plurality of obstructions for engaging and deflecting the car.

15. An amusement device comprising an inclined surface, a resilient car adapted to roll by gravity down the surface and a plurality of obstructions for engaging and deflecting the car.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM F. MANGELS.

Witnesses:

THEO. G. HOSTER,

EVERARD BOLTON MARSHALL.